

Amendments to the Specification:

Please replace the paragraph beginning at line 8, on page 7, with the following amended paragraph:

The pump refrigerant in the pump refrigerant circuit 15 is not only used for electricity generation at the thermoelectric converter 4, but also used to assist air conditioning performed by an air conditioner mounted on the hybrid automobile. Specifically, the pump refrigerant circuit 15 has a first heat exchanger 17, which performs heat exchange between the low ~~pressure~~ temperature refrigerant passing through the first heat exchanger 17 and air that will be drawn into the passenger compartment. The pump refrigerant circuit 15 also includes valves 18, 19 for selecting a course for the pump refrigerant, which is circulated by the refrigerant pump 16, between a course including the thermoelectric converter 4 and a course including the first heat exchanger 17. In other words, the valves 18, 19 are switched such that the pump refrigerant is selectively guided to one of the thermoelectric converter 4 and the first heat exchanger 17. For example, when the cooling load is great during operation of the air conditioner, the valves 18, 19 are switched to guide the pump refrigerant to the first heat exchanger 17. In other conditions, the valves 18, 19 are switched to guide the pump refrigerant to the thermoelectric converter 4. The valves 18, 19 function as a switching device to switch the course through which the pump refrigerant flows.

Please replace the paragraph beginning at line 31, on page 7, with the following amended paragraph:

A refrigeration circuit for the air conditioner, or an air conditioner refrigerant circuit 20, includes a compressor 21. As the compressor 21 operates, the air conditioner refrigerant circulates in the circuit 20 and passes through a condenser 23 and an evaporator 22 provided in the circuit 20. High temperature and high pressure air conditioner refrigerant that has been discharged from the compressor 21 is liquefied by the condenser 23. The liquefied refrigerant is then sent to the evaporator 22 via an expansion valve (not shown). The evaporator 22 performs

heat exchange between refrigerant passing through the evaporator 22 and air that will be supplied to the passenger compartment. As a result, the refrigerant evaporates, and the latent heat required for the evaporation cools the air, which is, in turn, supplied to the passenger compartment. The first heat exchanger 17 is located in the vicinity of the evaporator 22. Air that has been cooled by the evaporator 22 is further cooled by the pump refrigerant that passes through the first heat exchanger 17.

Please replace the paragraph beginning at line 8, on page 9, with the following amended paragraph:

After being desorbed, the working medium is in an evaporated state. A heat pump coolant circuit 26 is provided as a cooling system for liquefying the evaporated working medium. A second heat exchanger 27 is provided in the heat pump coolant circuit 26. The second heat exchanger 27 is connected to the air conditioner refrigerant circuit 20 through passages 28, 29. Low temperature air conditioner refrigerant is drawn into the second heat exchanger 27 of the air conditioner refrigerant circuit 20 as a valve 30 provided in the passage 28 is opened and closed. Also, as a valve 31 provided in the passage 29 is opened, high temperature air conditioner refrigerant is drawn into the second heat exchanger 27 from a section of the air conditioner refrigerant circuit 20 that is downstream of the condenser 23. As the valves 30, 31 are opened and closed, the amount of the high ~~pressure~~ temperature air conditioner refrigerant and the amount of low temperature air conditioner refrigerant drawn into the second heat exchanger 27 are adjusted. Accordingly, the temperature of the air conditioner refrigerant in the second heat exchanger 27 is adjusted. When heat pump coolant in the heat pump coolant circuit 26 passes through the second heat exchanger 27, heat exchange takes place between the heat pump coolant and the air conditioner refrigerant, which cools the heat pump coolant so that its temperature is maintained in a range, for example, between 30°C and 50°C. That is, to maintain the temperature of the heat pump coolant in the range, the amount of high temperature air conditioner refrigerant and the amount of low temperature air conditioner refrigerant drawn into the first heat exchanger 17 are adjusted.

Please replace the paragraph beginning at line 1, on page 12, with the following amended paragraph:

The working medium that has been liquefied by the condenser 42 flows into the evaporator 43. In the evaporator 43, the pump refrigerant that has entered the heat pump 14 through the port 15a flows through a section of the pump refrigerant circuit 15 that corresponds to the evaporator 43. Also, in the evaporator 43, the liquefied working medium evaporates, and the latent heat of evaporation lowers the temperature of the pump refrigerant. As the pump refrigerant is cooled in this manner, the temperature of the pump refrigerant is maintained to be low, for example, in a range between 10°C and 20°C. The pump refrigerant, the temperature of which is maintained to be low, flows to the thermoelectric converter 4 or the first heat exchanger 17 shown in Fig. 1 through the pump refrigerant circuit 15, and is used for electricity generation at the thermoelectric converter 4 or for assisting air conditioning of the air conditioner.

Please replace the paragraph beginning at line 20, on page 14, with the following amended paragraph:

(6) The pump refrigerant cooled by the heat pump 14 is guided to the first heat exchanger 17 when air conditioning needs to be assisted during operation of the air conditioner. In other cases, the pump refrigerant is guided to the thermoelectric converter 4 and is used in electricity generation at the thermoelectric converter 4. In this manner, when the pump refrigerant is not used for assisting air conditioning, the pump refrigerant is always used for electricity generation at the thermoelectric converter 4. Therefore, cooling of the pump refrigerant by the heat pump 14 is not performed for no purpose. In other words, energy efficiency is further improved.

Please replace the paragraph beginning at line 22, on page 15, with the following amended paragraph:

In the illustrated embodiment, the pump refrigerant is selectively guided to the thermoelectric converter 4 and the first heat exchanger 17. However, the pump refrigerant may be guided to both of the thermoelectric converter 4 and the first heat exchanger 17. Further, a configuration may be adopted in which the pump refrigerant is guided to both of the thermoelectric converter 4 and the first heat exchanger 17 only when the air conditioning demands assistance, and the pump refrigerant is guided only to the thermoelectric converter 4 when there is no such demand.